

DOCUMENT RESUME

ED 175 576

PS 010 880

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TITLE Parent as Teacher: Perspective of Function and Context.
INSTITUTION Michigan State Univ., East Lansing. Inst. for Family and Child Study.
PUB DATE Nov 78
NOTE 37p.; Paper presented at the Parents as Educators Conference (Washington, D.C., November 19-21, 1978)
EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Compensatory Education; Elementary School Students; Elementary Secondary Education; *Family Influence; *Intervention; *Parent Child Relationship; *Parent Education; *Parent Influence; *Parent School Relationship; Parent Teacher Cooperation; Preschool Children; Secondary School Students; Social Differences
IDENTIFIERS Ecological Approach

ABSTRACT

A review of the research literature on parents as teachers yields several conclusions concerning the context and function of the family in the child's learning and development: (1) the parent-as-educator functions in the context of a complex family eco-system which interfaces efficiently or inefficiently with other systems, such as the school; (2) appropriate parent education programs grow as a partnership between culturally sensitive professional expertise and parent determined values, beliefs and attitudes; (3) the family system accounts for more variance in child learning than does the system of the school; (4) the interface of family systems with relevant school systems is not, overall, a highly efficient one in the United States at this time, and this reality is counterproductive to the role of parent as educator as well as to the role of teacher as educator; (5) programs facilitating parent-as-educator at the preschool level result in substantial improvement in children's cognitive functioning, and this improvement appears to be cumulative with lasting impact; (6) the parent's role immediately following birth and throughout the first three years is highly important, and gains from parent/child programs are more evident in the early years; (7) programs which facilitate parent-as-educator functions are beneficial to all the children in the family and not just the target child; (8) programs which facilitate parent-as-educator functions can have a positive impact on the parent's affective and cognitive functioning. (A list of parent/child projects and research studies is included in the appendix.) (Author/SS)

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PARENT AS TEACHER:
PERSPECTIVE OF FUNCTION AND CONTEXT*

by

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*Paper to be presented at the Parents as Educators Conference, National Institute of Education, Washington, D.C. November, 1978.

I. INTRODUCTION

The area of parents as teachers represents a large and rapidly expanding volume of literature. The proliferation of research studies, reanalyses, and evaluations require extensive organization and integration to discover what is said. The problem is not a lack of information, but rather the ability to find the knowledge in the information we have. The sheer volume of material available and the amount of lead time available for this task did not allow for extensive data synthesis. This is not a comprehensive state-of-the-art paper nor a comprehensive review of the area. More time would be required for such a task. The present paper is, however, our attempt to respond to the literature, particularly recent integrative summaries, and further, to place these in that context that we interpret to be important to their synthesis.

As Leichter (1974) has noted, "The family is a difficult subject for inquiry because it is so much a part of everyone's experience that it becomes hard to avoid projecting one's own values, beliefs and attitudes onto the experience of others" (p. 215). Any review and discussion of parenting function should keep this in mind.

Parent education is not a new area of inquiry. Goodson and Hess (1975) in their review note that childrearing advice was communicated to mothers through pamphlets as early as the eighteenth century (pp. 8-9). Groups comprised of middle-class mothers called "Maternal Associations" (Sunley, 1955) were organized before 1820 to meet and discuss childrearing problems. The middle-class orientation of early parent education efforts is confirmed by the 1929 Yearbook of the National Society for the Study of Education which noted that programs of this period were not remedial programs for disadvantaged families, but were "supported by parents giving thoughtful

consideration to training" (p. 276). Brim (1959) reports that by 1920 there were over 75 major organizations conducting parent education programs (p. 328). National private organizations, university-based research programs, teacher's colleges, public and private school systems, social agencies, child guidance agencies, health agencies, and religious groups all provided parent education.

Since these earlier efforts to "educate" parents, the focus has shifted from the moral and religious development of children to an interest in emotional and personality development, physical health, mental health, and cognitive functioning. The inception of Head Start in the 1960s saw a shift toward programs designed to aid low-income families. The primary emphasis was placed on cognitive development and better early preparation that might lead to improved school achievement of the children as they progressed through the educational system. Many of those programs sought not just to educate parents but to involve them in partnership roles with professionals toward bettering the potential development of their children (Bronfenbrenner, 1974; Boger, Kuipers & Beery, 1969).

The federally funded Head Start and Follow Through programs were initially based upon a deficit hypothesis (Weikart, 1975, p. 3). Most of these models were premised upon the assumption that the deficiencies of the home environment could be compensated for by expanding downward the role of the schools. The mid-1970s, however, have brought increased debate and questioning about the influence of the school (Brookover, 1977). Gage (1977) states that, "a measure of the pupil's scholastic aptitude or prior achievement, obtained before the beginning of instruction, correlates much more highly than teacher behavior variables with measures of pupil achievement obtained at the end of the teaching period" (p. 76). He estimates the correlation to be as high as .7 to .9. But what accounts for these preinstructional variations? Bloom

(1976) feels that a large amount of the variation in academic achievement can be attributed to the influence of the home (p. 2).

What are the conditions in the home which account for this difference? When an attempt is made to look at education of children by parents, considerable similarity is prevalent in the use of concepts such as socialization, enculturation, development and education. The pervasive influence of parents on their children is described in muddled terminology across disciplines (Paolucci, 1977; Leichter, 1974) that inevitably involve questions of education even when the label "education" is not used. Indeed, one of the difficulties that became apparent at the onset of this review is the need for educators to consider parents as educators in a broad rather than a narrow meaning of that word. The focus of the literature on the effects of parental behavior on children has been primarily on cognitive dimensions, particularly aspects of school achievement. This is related to the emphasis placed on outcomes with limited attention to the complex system of the family and its interface to other complex systems like the school. As Leichter (1974) points out, "There is a certain vagueness about the process by which parental behaviors are linked to educational effects. The process is often implicit and assumed rather than explicit and observed" (p. 186).

II. FAMILY FROM AN ECOLOGICAL CONTEXT PERSPECTIVE

Ecological perspectives can be an aid in understanding the family's needs and resources. Such an ecological model allows for a holistic approach to the family. This affords the opportunity to view the family, the environments which act upon the family, and the impacts that the family makes on the environment. Parents and children do not exist in isolation. What affects one family member also affects the family unit. The family and the environment interact and are interrelated in specific events. The answer to questions about an

individual family member, the interaction of family members, or the collective action of the unit, is dependent upon specific dynamics within a holistic context. The relationships of education occurring in various societal settings and the relationship of these settings to each other is extensively examined and synthesized by Leichter (1978). Paolucci (1977) has also examined the contextual dynamics of the home as a learning center.

Through time and across cultures the family has been viewed as the first instructor and the home viewed as a primary setting for learning basic life tasks. The education of family members to assume productive and supportive roles within the family and in the larger society is a critical and, at specific points in the life span, a unique output of household production.¹ The pervasive influence of the family environment on its members, both young and old, has been widely documented (Lamb, 1976; Carew, Chan & Halfar, 1976; Leibowitz, 1974; White, Watts et al., 1973; Baker & Paolucci, 1971; Rapaport & Rapaport, 1971; Aries, 1967). Family members actively respond to the environmental demands of the family setting and their own physiological needs and in so doing learn and develop over time. They simultaneously modify the environment by their responses. In this way each family member learns, grows and develops through the activities that occur on a day-to-day level. For the child transactions with the most significant family adults and the ongoing functional reality of "links" for these transactions to others is crucial. Through these transactions, as Paolucci (1977) notes, children and parents, initially within the home environment, then in an ever expanding

¹The definition of household production is defined by Margaret Reid (1934) in *Economics of Household Production* as "those unpaid activities which are carried on, by and for the members, which activities might be replaced by market goods, or paid services, if circumstances such as income, market conditions, and personal inclinations permit the service being delegated to someone outside the household group" (p. 11).

set of contacts in neighborhood, community, school, work and leisure groups, learn those expectations which define the boundaries of their repertoire of personal competences (p. 1). The school and the teacher are a part of this whole. Their impacts cannot be fully understood without viewing them within this context.

The family organizes and uses a complex of resources--a mix of materials, "things," time, labor, talents, skills and space--to achieve its particularistic set of goals (Paolucci, 1977, p. 2). In most families, some of these resources are invested in building the human resource of each family member; i.e., the capabilities of members so they can become productive and self-fulfilled persons. From this stance it is appropriate to view the development of the human resource as an investment in human capital and the role of the family and its members as one of production. Hence, a major kind of household production becomes that of enhancing the productive capabilities of family members.

Recently, considerable research has focused on time use in families and investment in human capital based on the assumption that human capital is developed primarily through human interaction. Mincer and Polachek (1974) have theorized that family investments and time allocations are linked. The distribution of human capital in the family influences the use of time; i.e., parent's educational level is linked to time allocated to childrearing.

Much of the research in the "new home economics" (Schultz, 1976) examines the conditions which affect the family (Paolucci, 1977). The impact of institutions in which family members are involved enhance or constrict the development of human resources. For example, economic constraints make it difficult to secure adequate food, clothing, or shelter and in effect place constraints on learning. Moreover, if adults are involved in the activity

of earning a living, little time is left for family involvement and interaction. If interactions between and among people are the essence of the educative process as Bronfenbrenner (1976) suggests, this time for parents and children to interact is critical.

Parents as teachers are making investments in children through time spent with them. This investment in human resource development occurs both deliberately and "by chance" or incidentally. Much of the education that occurs in the family is informal and appears as incidental--a by-product--of other family activities. Within the context of the home environment, the development of family members occurs through the informal transactions of family members with one another and with the materials in the home space. The learning is achieved largely through modeling; i.e., imitation, identification, and internalization of ways of behaving. This learning is embedded in everyday activities, thus it is often unconscious or at the edge of consciousness; hence, it is invisible and unrecognized.

Some development of family members in the home setting is deliberate: particular efforts are made to teach and learn. This learning is more conscious and recognized. It occurs when a family member deliberately guides the behavior of another: teaches skills, disciplines, rewards or punishes given actions. Much of this learning is a "passing of information" from generation to generation or the taking on of new ways acquired through inputs from outside the family system (i.e., extension classes, peer and work groups, or even the formal school system) all of which is filtered into the family. The current parent as teacher movement reflects the efforts of professional educators to penetrate the home with deliberate learning and conscious reflection on the part of parents that will enhance the development of children and increase their life chances.

The report of Forum 15 of the 1970 White House Conference on Children placed considerable credence on the role of participation in everyday family activities as a means for developing human resources.

A child learns, he becomes human, primarily through participation in a challenging activity with those he loves and admires. It is the example, challenges and reinforcement provided by people who care that enables a child to develop both his ability and his identity. . . and it is primarily through exposure and interaction with adults and children of different ages that a child acquires new interests and skills, and learns the meaning of tolerance, cooperation and compassion. (pp. 241-42)

One can assume that some learning--some development of the human resource--is embedded in family interactions. But exactly what that learning is, or the quality of it, is not known. Caution must be taken in drawing the generalizations that participation in an activity or interaction is an investment in human capital. Nonetheless, observations of participation in families aimed at discovering the teaching-learning process that occurs between adults and children should offer new insights into the development of human capital--its measurement, cost, and worth. Although the need for understanding this learning is readily recognized much of the learning that takes place in the family remains invisible, unintended, and ignored. The systemic context of family function, then, becomes crucial to interpreting the more molecular data base we have about parent as educator and serves as the target for much of intervention.

III. EARLY EVIDENCE OF PARENT AS TEACHER

The foundation of parent as teacher begins very early. The transactional parent-child dyad of teacher and learner is at no time more important than during birth and the period immediately following (Lozoff, Brittenham, Trause, Kennell & Klaus, 1977; White, 1975; Klaus & Kennell, 1976). The work of Spitz (1945), Bowlby (1952), and Ainsworth (1965) with institutionalized infants emphasizes further the transactional needs of the newborn. Babies need intimate involvement with other human beings for their immediate survival as well as for their long-term emotional health.

Recent research (Klaus & Kennell, 1976) indicates that naturally organized patterns of "bonding" behavior in both neonates and parents have evolved to help ensure that this requirement is met. These studies suggest that maternal contact with the newborn in the immediate period following birth may influence early maternal affection and responsiveness. In one study (Klaus & Kennell, 1976), two groups of low-income, primiparous mothers were assigned to different postpartum experiences. One group had routine contact with their infant every four hours for feeding. The other group was given up to eight hours of additional contact with their infant during the daytime. During a twelve to twenty-one month follow-up study, more of the infants who had contact only every four hours required hospital attention (nonorganic failure to thrive, abuse, neglect, or abandonment). Prenatal preparation for birth and institutional procedures may be important factors that can facilitate such early contact and the early development of emotional bonds.

The importance of maternal attitudes which predict to maternal/infant involvement in the neonatal period is suggested by a longitudinal study of developmental disturbances in healthy infants (Brouseard & Martner, 1970). After delivery and at the end of the first month, healthy mothers were asked to

rate how much they thought normal babies cry, spit, feed, eliminate, sleep, and are predictable. The mothers were then asked to rate their own infants on the same scale. The mothers who perceived their infants as better than average had children with fewer later behavioral or emotional difficulties. Situations where infants were perceived as worse than average were predictive of problems as long as four-and-a-half to eleven years later.

Cremin (1974, p. 201) has remarked that, "What is taught is not always what is desired, and vice versa; what is taught is not always learned, and vice versa. Moreover, there are almost always unintended consequences in education; indeed, they are frequently more significant than the intended consequences." Implicit in this research on early parent/child interaction is the assertion that the infant does not play a passive role in mother-infant interaction (Rheingold, 1969). Although at first the responsibility for initiating behavior rests principally with the mother, interaction is influenced also by the characteristics and behavior of the infant, even during the neonatal period. This neonatal behavior is feedback to the mother, so that one mother may respond differently to successive infants, although the mother's experience with previous infants may play a part in this (Ainsworth, 1965, p. 45). Maternal and infant behaviors, matched or mismatched, interact, and this interaction helps to shape the course of subsequent behaviors and interactions.

The importance of positive reciprocal interactions over time has also been well demonstrated in Gordon's work. Gordon and colleagues (1975) speak of two patterns of mother-infant interaction in teaching situations. One pattern, labeled "ping pong," consists of the mother initiating something and, within three seconds, the child doing something responsively; action and reaction being repeated. This fundamental pattern was found to be related to how well children do on intellectual tests at age one. The other pattern was labeled "professional."

This pattern saw the mother talking at the child without paying attention to the child's response. Such transaction was related to poorer performance on subsequent intelligence measures. An important dimension of these early patterns of interaction is that they are very similar to those seen as necessary for later early childhood and upper grade parent-as-teacher functions (Gordon, 1975). Further, there is evidence indicating that early, positive parent/child transactions lead to increasingly positive parent-as-teacher functions, while extensive early difficulties tend to hamper later potentials for parent-as-educator functions (Bronfenbrenner, 1974).

IV. PARENT AS TEACHER IN THE PRESCHOOL YEARS

Three excellent summaries, and integration reviews of the massive efforts in early childhood since the early 1960s are of particular import in any summary of what we know about parent as teacher. The first of these, by Bronfenbrenner (1974) integrates much of the early work as it impacts on the interpretations of parent as educator in models of early childhood education. This was followed in 1975 by an extensive review of evaluative research particularly involving parents as teachers in programs for preschool children by Goodson and Hess. Finally the longitudinal, collaborative study of long-term efforts, by Lazar et al. (1977) sets forth definitive evidence of positive longitudinal impact.

Bronfenbrenner in his work entitled A Report on the Longitudinal Evaluation of Preschool Programs evaluated the follow-up data from preschool programs of two kinds: the traditional group setting outside the home, and programs involving a regular home visit by a project staff member who works with both parent and child. Some home visitor projects supplemented this with a group setting outside the home, others did not. Studies were included in the evaluation if: (a) there was systematic follow-up data for at least two years

after termination of the project; (b) similar information was available for a matched control group; and (c) the data was comparable from one project to the next (p. 2). Only seven projects (See Appendix A) were found which met all these criteria but twenty additional research studies were included "which failed to fulfill one or another of our requirements but provided evidence that could be used to challenge, confirm or clarify conclusions drawn from the primary investigations" (p. 3). The effect of initial I.Q. level, the role of age, the degree of deprivation, the effect of requiring prior commitment and problems of comparability are all discussed by Bronfenbrenner (pp. 8-13) as important contextual variables which have bearings on the interpretation of results.

Although long term gains were not substantiated, Bronfenbrenner arrives at several conclusions which support the importance and effectiveness of early home-based intervention efforts (pp. 52-54).

1. Preschool intervention in group settings shows children making substantial, initial I.Q. gains; that program children show a progressive decline in gains; and that the results point to factors in and around the home as critical;

2. That programs focusing on a home-based tutoring approach had similar results to preschool programs in group settings.

3. That programs focused simultaneously on parent (usually mother) and child resulted in I.Q. gains still evident three to four years after program; the intervention benefited not only the target child, but also other siblings; and that gains were higher when the parent rather than a staff member assumed prime responsibility for the child's development.

In supporting these conclusions, Bronfenbrenner emphasizes the work of Levenstein (1970). In her project the mother was treated as a colleague by a

home visitor. The home visitor shared verbal interaction techniques with the mother, first demonstrating them to the child, then drawing the mother into the activity, and finally taking a secondary role as the mother repeated and elaborated the activities. The home visitor was told to, "Keep constantly in mind that the child's primary relationship is with his mother; do all you can to enhance that relationship" (Levenstein, 1970a, p. 429). The significance of this project is that it did not target on mother or child, but on the two of them as an interactive system. This strategy using a focused, sustained, sequential and highly qualitative interactive approach involving the parent/child dyad is also seen in the intervention efforts of Weikart (1970), Gray and Klaus (1970), Kames et al. (1970), White (1973) and others and reflects directly on Bronfenbrenner's original (1958) and subsequent analysis (1968, 1972) bearing out the child's need for a consistent, quality interaction with a significant caregiver over time.

In the early years of life, the psychological development of the child is enhanced through his involvement in progressively more complex, enduring patterns of reciprocal contingent interaction with persons whom he established a mutual and enduring relationship. (Bronfenbrenner, 1972)

These findings are consistent with Bronfenbrenner's (1974) conclusion that the I.Q. gains of programs focusing on parent and child simultaneously, result in longer lasting gains than either home-based tutoring programs or group settings outside the home (although there reaches a point where these declines do begin to appear even for the group with simultaneous focus after three or four years), and that the intervention benefits not only the target child, but the other siblings as well (pp. 52-54). As he notes:

Since the participants remain together after intervention ceases, the momentum of the system insures some degree of continuity for the future. As a result, the gains achieved in this kind of intervention are more likely to persist than those attained in group preschool programs, which, after they are over, leave no social structure with familiar figures who can continue to reciprocate and reinforce the specific adaptive patterns which the child has learned. (p. 27)

Based upon the evaluation of these data Bronfenbrenner posed the following resultant principles he believes warranted by the evidence:

General Principles²

1. Family Centered Intervention. The evidence indicates that the family is the most effective and economical system for fostering and sustaining the development of the child.^{r3}
The evidence indicates further that the involvement of the child's family as an active participant is critical to the success of any intervention program.^r Without such family involvement, any effects of intervention, at least in the cognitive sphere, appear to erode fairly rapidly once the program ends.^r In contrast, the involvement of the parents

²The propositions are stated in terms of parent rather than mother alone in the belief that subsequent research will indicate that they apply as well to the father, or any other older member of the household who is prepared to assume a major and continuing responsibility for the care of the child" (p. 55). [Footnote number author's own.]

³Bronfenbrenner indicates the following in regard to the superscripts "i" and "r":

"To indicate the extent to which each of the following generalizations are supported by research results, we shall label each one by a symbol. The superscript "i" denotes that the conclusion is inferred from the evidence; the superscript "r" means that the generalization is supported by replicated results obtained in two or more well-designed studies described in the main body of this analysis, but that there is need for further research designed specifically to test and refine the proposition in question" (pp. 54-55).

as partners in the enterprise provides an on-going system which can reinforce the effects of the program while it is in operation, and help to sustain them after the program ends.²

3. Ecological Intervention. The first and most essential requirement is to provide those conditions which are necessary for life and for the family to function as a childrearing system.^r These include adequate health care, nutrition, housing, employment, and opportunity and status for parenthood.ⁱ These are also precisely the conditions that are absent for millions of disadvantaged families in our country.^r

An extensive review of preschool educational experiments was also conducted by Barbara Dillon Goodson and Robert D. Hess (1975) entitled, Parents as Teachers of Young Children: An Evaluative Review of Some Contemporary Concepts and Programs. This review was stimulated by three questions:

1. What are the assumptions underlying the involvement of parents?
2. In what ways are parents being involved, and what roles are they expected to play?
3. Is there evidence that some parent involvement programs have more effect than others on the academically relevant performance of the children toward whom they are directed? (p. 2)

In examining twenty-nine such programs, (see Appendix A for listing of programs) Goodson and Hess found the underlying goals to be uniform toward the establishment of a standard most likely to produce intelligent, well-adjusted, academically successful children (p. 10). The assumptions about parents common to most of the programs reviewed include:

1. The home is important as the environment preparing the child for entry into the public school.

2. The early years of a child are particularly important in setting the pace and direction of cognitive growth.
 3. The impact of the family is not usually overcome by later schooling.
- (pp. 10-11)

As noted by Bronfenbrenner and others, educational intervention programs for young children have been infamous for producing immediate short-term effects in "cognitive" areas which fade out when the children are tested well after the intervention is completed (White et al., 1973; Campbell & Frey, 1970; Wolf & Stein, 1967). Of the twenty-nine programs Goodson and Hess reviewed, twenty-six tested the children when they entered and when they exited the program. Of these programs, twenty-three produced significant gains for children on standardized intelligence tests by the end of the intervention showing that programs to train parents as teachers of their own children are successful in producing immediate advantages (p. 203).

Nine of the programs which Goodson and Hess examined included follow-up testing of program and control children as part of their evaluation design. The follow-up testing of children ranged from three months to five years after the end of the intervention (pp. 203-212). The data from these nine programs indicated that seven of the programs reported positive or significant differences on standardized intelligence tests favoring the program children over varying lengths of time (p. 208). The programs thus gave the children in the program an immediate advantage over control children in average I.Q. score and that this advantage was sustained into grade school. Both program and control children declined somewhat in score over time, but program children usually continued to score consistently higher.

Three of the programs reviewed by Goodson and Hess assessed classroom grades or performance on standardized achievement tests and all showed positive

results (p. 213). Not many of the programs looked at long-term differences in academic achievement of program and control children, but those that did found strong evidence for the value of helping the program children keep in school and out of special classes (p. 215). The conclusions drawn by Goodson and Hess give evidence that program children maintain their advantage for one or two years after the completion of the intervention, but that follow-up testing at longer intervals was inconclusive with both groups exhibiting declining I.Q. scores, with program children remaining superior.

When specific program features of parent components were examined in light of a program's immediate and/or long-term effects on children, it was found that the more a program focused on the parents, the more likely it was to produce significant and stable gains in children, favoring home visits alone or in combination with preschool classes; that no one content of the parent component was favored by the outcome criteria; that greater effects in immediate and follow-up testing were produced by a one-to-one parent/teacher ratio; and that high program structure was most often related to greater program effectiveness (pp. 226-228).

Immediate outcomes of the programs on parents, immediate outcomes on parent/child interactions and changes in sibling of program families were also examined by Goodson and Hess. Of those programs measuring changes in parent attitudes, it was found that parental sense of personal efficacy or control over one's own life and their attitude toward the child and his/her development were found to most often be significantly changed (pp. 228-229). It was also shown that the programs consistently found evidence of change in parent's patterns of verbal behavior toward their children by using language to reinforce or support the child's efforts and the use of syntactically complex or varied language patterns with their children (p. 232). It was also found that

programs produced changes in parental behavior which benefited the intellectual development of all the children in the home (p. 236).

The review of Goodson and Hess on the outcomes of a group of twenty-nine preschool intervention programs developed to help parents teach their own children can be summarized as showing that the programs consistently produced significant immediate gains in children's I.Q. scores, seemed to show long-term effects on children's I.Q. and school performance, and seemed to positively alter the teaching behavior of parents.

The most important data with regard to long term program evidence supporting parent as teacher function is that included in the recent review by Lazar and his colleagues regarding longitudinal effects of early intervention. A national collaborative study of twelve research groups (see Appendix A for listing of programs) entitled The Persistence of Preschool Effects (Lazar et al., 1977), summarizes the findings of current analyses of longitudinal studies of low-income children, who participated in experimental infant and preschool programs initiated in the 1960s. These youngsters now range from nine to eighteen years of age (p. 1).

The problem faced in this effort, as in Bronfenbrenner's and Goodson and Hess's reviews, was how to pool data from twelve different investigators. The consortium chose to analyze the results of each project separately, and then pool the summary results from the various projects, using program within site as their unit of analysis (Darlington, 1978, pp. 1-3). To ensure that the overall significant results were not caused by one exceptional program, the projects were rank ordered by degree of confirmation to the experimental hypothesis, and then deleted from the analysis one-by-one (pp. 3-4). This test allowed them to disregard a result if it evaporated with the deletion of one or two projects or programs.

The data discussed in this report included data collected independently by each research group at the beginning of their program and over a number of years after the program ended, and, common follow-up data collected in 1976-1977 (Lazar, p. 1). The first question to ask of a project like this is, "Does the evidence indicate that early education improves the academic performance of program children?" With only two exceptions, the mean I.Q. of program groups is higher than the mean I.Q. of control groups up to three years after children have left the program (pp. 49-57). In terms of the skills which are measurable by I.Q. tests then, this increase lasts for several years but eventually fades. This then, does not constitute a permanent increase in intellectual skills (p. 61).

Indicators of actual school performance--the assignment to special education classes or retention in grade--which may be a better measure than a predictive instrument, were also examined. The combined evidence of five projects which looked at whether program children had been assigned to special education classes shows that early education significantly reduces the number of children placed in such classes (pp. 63-67). The same trend was found from seven projects which looked at whether program children had been held back in grade more than control children (pp. 67-69). The findings of Woodman's Micro-Social Learning System program, which had no control group, are quite impressive because they indicate that high risk children who attended an early intervention program, were able to meet the minimal school requirements as well as the general school population (pp. 69-72).

Included in the data which this group collected in 1976-1977 is information from interviews conducted with former program participants and their parents. The preliminary findings from the youth interview indicate that there is a slight tendency for more control than program children to drop out of school,

that control and program children have similar educational aspirations, and that program children rate how they feel they are doing in school higher (pp. 82-84). The results of the parental interviews was consistently positive with one hundred percent of parents whose children had been in home based programs, 93.4 percent of parents of children from center based programs, and 87.8 percent of parents of children from combination programs answering that the program was a good thing for their child (p. 86). The cognitive aspects of the program that their child attended was most frequently chosen by parents as what they liked best about the program (pp. 87-89). In sum, the most important finding from this study is that low-income children who received early education are better able to meet the minimal requirements of their school. This study found no indication of the most effective age or length of intervention on program children (p. 110).

Another long term research that has impacted on what we know about parent as educator during the preschool period is that of White (White and Watts, 1973). This extensive work observed children between the ages of one and three in their homes in interaction with their mothers as an attempt to ascertain causal factors for complex early behavior. They found that those mothers who were most effective tended to

interact more with (their children), engage in more intellectually stimulating activities with them, teach them more often, encourage them more often (and) initiate activities with them more often
(White & Watts, 1973, p. 199)

This is quite in line with the findings of Bronfenbrenner, et al. (1974), as is the work of Gotts et al. (1978) at the Appalachian Educational Laboratory and the results of the Parent Child Development Center Replication Experiment (Robinson, 1977).

V. PARENT AS TEACHER DURING THE FORMAL SCHOOL YEARS

A weakness quickly noted in the initial Head Start program was the lack of designed linkage to the public school. Once a child left the preschool program there was little or no continued support offered by the school system. The Follow Through program was initiated to bridge this gap. The Parent Education Follow Through model was specifically designed to focus on the parent as educator function in an attempt to meet this need (Gordon & Breviogel, 1976).

The emphasis of the program...stresses the parent's teaching role as being equal to, not subordinate to, the teacher's. Basic to the model is the recognition of the fact that parents are uniquely qualified to guide and participate in their children's education. In addition to their key role as teachers in the home, parents contribute ideas for new home learning activities and are encouraged to become involved in the day-to-day activities and operations of the school. They are viewed as "partners" with, rather than "clients" of the school. (Gordon & Olmstead, 1978, pp. 74-75)

The Parent Education model received a highly critical and widely publicized evaluation from Abt. Associates which concluded that models which emphasize cognitive or basic skills "succeed better" than other models including those focusing on parent involvement (Abt. Ass. 1976). A reanalysis of the Follow Through data indicated this conclusion to be erroneous (House, Glass, McClean-Walker, 1977). The evaluation by House et al. suggests that academic achievement is not the sole guide to effectiveness of a program and that contextual factors are extremely influential.

If early educational efforts and enriched home environments are important in the early years, there is no evidence to indicate that they decline in importance after the child enters the formal school system. A major

investigation of the effectiveness of schooling (Coleman, 1966) suggested that the variation among students in academic achievement is more a result of differences in home background than differences among schools. Jencks (1972) confirms this: "Overall the evidence shows...schools contribute almost nothing to the...level of cognitive inequality...it is very difficult to identify specific characteristics of schools that influence student achievement." Other investigations support the same general conclusion. The Rand report, How Effective is Schooling (1971) disputed the long held assumption that there is a link between the amount of money spent on education and the quality of schooling that resulted. The International Study of Educational Achievement (1973) looked at nineteen countries and indicated that, all over the world, the nature of the home environment is the crucial factor, more important than the school in determining children's overall achievement. It found for example, that the number of books and magazines in a student's home had a greater impact on literary achievement than the income level of the student's family (from Rich, 1976, p. 73).

The focus of much educational research since Coleman's study has centered on classroom interaction or teacher effects during the school hours (Gage, 1976; Doyle, 1976). Based upon the literature research into exactly what parents do to reinforce, supplement, ignore or subvert school goals has not been a topic of extensive work. For most public schools, the contact between the home and the school has been largely limited to yearly open houses, report cards, parent-teacher conferences, and homework. Even these contacts are usually one way: from teacher to parent. This situation becomes apparent in a review Working with Parents in the Primary School (Howard, 1974), which indicates that the institution of the school dominates most parent-teacher relationships.

These models suggest that factors in the home/school interface might be altered to expedite achievement in older children. In an attempt to discern what such factors in the home might be, Walberg and Marjoribanks (1976) re-analyzed the four year longitudinal survey of reading achievement among more than 3,000 English children (Plowden, 1967). They found that adjusted gains in achievement were as closely related to measure of parental encouragement and stimulation of adolescents as the same measure of the parents of young children.

To assess the quasi-experimental effects of such evidence, Walberg (1978) analyzed the results of a school-based parental involvement program on reading achievement. The program involved an inner-city elementary school (K-6) located in one of Chicago's most economically depressed areas. The model for this program was the Smith (1968) project. The Chicago project originated in the school and was directed toward the entire school population: teachers, students and parents. Staff-parent committees were appointed to plan and guide the accomplishment of school goals. A contracts approach was used by the district superintendent, the school principal, the classroom teachers, the parents, and each child to work toward better performance (p. 4). Various social activities were carried out to promote school pride and determination to achieve. On the academic side, a booklet of school policies and academic activities was prepared for the parents to encourage their children's reading in the home. Some participants (parents and teachers) were more intensively involved in the project than others. Walberg indicates that students in classes where parents and teachers were intensively involved in the program, gained twice the grade equivalents on reading achievement scales as students in classes where parents and teachers were less intensively involved (p. 8). Such programs merit further consideration and research. The question of

what gain can be sustained throughout a particular child's school career in an inner city environment remains to be answered. Continuation and replication with systematic evaluation is needed, but as Walberg notes, "What's terribly important about this project is that it shows a child is not a lost cause just because he's past 6." (Newsweek, November 15, 1976)

The parents as educator literature becomes even thinner as the child progresses into the middle and high school years. This ascent up the educational ladder coincides with a greater and greater degree of subject matter specialization by educators. Just as we would not expect a teacher to teach without adequate preparation, the involvement of parents as educator, in the more deliberate sense during these latter years, cannot be accomplished without careful and deliberate programming.

An effective involvement of parents at the elementary and secondary level has been as tutors of children. Although the supposition that putting two people together and designating one of them as a tutor will lead to a healthy, profitable, academically enhancing relationship, is simply untrue (Harrison, 1967; Niedermeyer, 1969), the program Structured Tutoring (Harrison & Wilken-son, 1978) offers a relatively new approach for parents to help in the formal instruction of low achieving children. Harrison feels that this type of tutorial relationship can be successful if it is structured to train parents to tutor their children by (1) use of principles of learning and insure mastery of principles before moving to the next step in the sequence; (2) being material specific; (3) being task specific; and (4) including aspects of record keeping (p. 29). If parents can be involved in such an effort as true colleagues a number of possible advantages may occur; including increased parent/child trans-action, increased home/school understanding, and conceivably, cost benefits to the overall instructional effort.

The basic conceptualization of the Parents Are Teachers Too effort, a program of language intervention developed by Boger and his colleagues (Boger and Kuiper, 1971) was also focused upon home/school process. Although the content of the educational effort was initially language development, the major thrust of the model was home/school process, particularly teacher/parent facilitation. Like Levenstein (1970) and Gordon (1972), the model attends to the careful construction of a colleague relationship with the parent. Unlike the home visitation models, the Parents Are Teachers Too facilitates the teacher/parent dyad specifically.

The first evaluation of the program, consisting of a rural sample (Boger, Kuipers, Berry, 1969) found that language treatment groups performed significantly better than the placebo group on the Verbal IQ subscale of the WPPSI. The two language groups saw the mother use significantly more specific language in the explanation of a task to the child. These two treatment groups also used more words and more complex language patterns when telling a story to their children. The program children increased in their positive perceptions of the mother's view of them as well as their own self-concepts.

Another study of the PTT program focused on research questions not directly related to the testing of the effects of the program, but rather on the use of incentives to initiate and maintain parental involvement in parent education programs (Boger, Kuipers, Cunningham & Andrews, 1974). An important result of this study was that, although attendance was stimulated by the provision of incentives, the children of those parents who came without incentives evidenced the greatest change in self-esteem.

The home/school process research of Schaefer is also extensive, as is the work of Rich at the Home School Institute (Barletta, et al, eds., 1978). Both

of these models have evidence of specific programming toward the home/school interface. The HSI has expanded and refined the cost effective "recipe" type of home developed approach in the Home Educational Learning Program (HELP). Like the Parents Are Teachers Too Model, the HELP program is a teacher/parent interactive effort, with lessons or "recipes" for home learning being provided for the parent to facilitate home learning activities. The program has outstanding face validity and appeals to participants. The authors have reported a significant rise in reading achievement (Mattox & Rich, 1978).

VI. PARENT AS EDUCATOR: A PERSPECTIVE ON RESEARCH PROCESS

The family environment is pervasive and malleable. It is also a highly complex system, evolving through time confounded by the interface with other highly complex systems. Walberg (in press) notes the difficulty we have estimating and replicating causal efforts in education (p. 2). Glass (1976) observes that

No education problem admits a single answer. We study a system and a process too complex and too interactive to give up its secrets easily. The variance in our findings of studies is essential, largely irreducible. It should be viewed as something to be noted in its own right, not something that can be eliminated with "tighter" designs or sharper measures. When a hundred studies can be arranged to yield a half-dozen answers to a question, we can feel confident that we are nearer the truth." (p. 6)

The difficulty faced when attempting to somehow pool data from different investigators, each looking at numerous hypotheses and rarely finding some measurement instruments used across a number of projects, presents any analysis with severe methodological problems. Each of the papers reviewed in this paper handled this in a different way. This fact is relatively unimportant. The important thing is that the problem was dealt with. The integrative analytic approaches suggested by Glass (1977) and Walberg (in press) would appear to assist in assuring that further research of this nature will be mounted.

VII. SUMMARY

In summary then, the following conclusions appear warranted:

1. Parent as educator functions in the context of a complex family ecosystem interface efficiently or inefficiently with other systems, i.e., that of the school.

2. Each parent and each child are unique. Each family is unique. Parents as educator functions for one family are not necessarily applicable to others. From our perspective, appropriate education programs grow as a partnership between culturally sensitive professional expertise and parent determined values, beliefs and attitudes.

3. The parent as educator and home as a learning center function of the family system accounts for more variance in child learning than does the system of the school.

4. The interface of family systems with relevant school systems is not, overall, a highly efficient one in the United States at this time. This reality is counterproductive to the role of parent as educator as well as the role of teacher as educator.

5. Programs facilitating parent as educator at the preschool level result in substantial improvement in children's cognitive functioning. This is based upon three independent reviews of major structure (Bronfenbrenner, 1974; Goodson & Hess, 1975; Lazar, et al, 1977).

6. There is evidence that the improved cognitive functioning as a result of parent/child programs is cumulative and has lasting impact (Bronfenbrenner, 1974; Lazar, et al, 1977).

7. Parent as educator functions immediately following birth (Klaus and Kennell, 1976) and throughout the first three years (White, 1968) are highly important. Further, there is evidence to support the inverse relationship of age of entry into parent/child programs and resultant gains (Bronfenbrenner, 1974).

8. Programs facilitating parent as educator family functions are of benefit not only to the target child but all children within the family (Bronfenbrenner, 1974; Goodson & Hess, 1975).

9. Programs facilitative of parent as educator functions can impact positively upon the parent's affective and cognitive functioning (Bronfenbrenner, 1974; Boger, 1971; Goodson & Hess, 1975).

Bronfenbrenner (1974) emphasizes the importance of "providing those conditions which are necessary for life and for the family to function as a childrearing system" (p. 55) as necessary antecedents to all parenting functions including parent as educator. Such things as adequate income, adequate employment opportunity, adequate health care, nutrition and housing are included within such necessities. The authors fully concur with this position.

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Appendix A

I. List of the seven projects meeting Bronfenbrenner's criteria.

<u>Project Name</u>	<u>Principle Investigator</u>
Howard University Preschool Program	Elizabeth Herzog
Perry Preschool Project	David P. Weikart
Early Training Project	Susan W. Gray
Philadelphia Project	E. Kuno Beller
Indiana Project	Walter L. Hodges
Infant Education Research Project	Earl S. Schaefer
Verbal Interaction Project	Phyllis Levenstein

II. List of programs evaluated by Goodson and Hess in the order of their appearance in the original study.

<u>Project Name</u>	<u>Principle Investigator(s)</u>
Mother-Child Home Program	Levenstein
Houston Parent-Child Development Center	Lelar & Johnson
First Generation Mother Study	Barbrack
Second Generation Mother Study	Barbrack
Three Home Visiting Strategies	Barbrack
Infant Intervention Project	Forrester
Study of Intrafamily Diffusion Effects	Gray & Gilmer
Ypsilanti-Carnegie Infant Education Project	Lambie, Weikart, Bond
Early Child Stimulation Through Parent Education Program	Gordon
New Orleans Parent-Child Development Center	Andrews, Bache, Blumenthal, Weiner
Birmingham Parent-Child Development Center	Lasater, Malone, Weisberg, Gilliom
Parent-Child Course	Rayder
Mothers Training Program	Karnes
Home-Oriented Preschool Education	A.E.L.
Early Training Project	Gray & Klaus
Special Kindergarten Intervention Program	Kingston & Radin
Ypsilanti Perry Preschool Program	Weikart

<u>Project Name</u>	<u>Principle Investigator(s)</u>
Ypsilanti Curriculum Demonstration Project	Weikart
Spanish Dame Bilingual School	Micotti
Ypsilanti Early Education Program	Radin
Hawaii University Center for Research in Early Childhood Education	Adkins
Learning to Learn Program	Springle
Structured Language Program	Mann
Teaching Parents Teaching	Champagne & Goldman
Parents are Teachers Too Program	Boger
Project Early Push	Downey
Oakland Preschool Program	Waters

III. List of projects included in the National Collaborative Study by Lazar, Hubbell, Murray, Rosche, and Royce.

<u>Project Name</u>	<u>Principle Investigator(s)</u>
The Philadelphia Project	Beller
Institute for Developmental Studies	Deutsch & Deutsch
The Parent Education Program	Gordon
The Early Training Project	Gray
The Family-Oriented Home Visitor Program	Gray
Curriculum Comparison Study	Karnes
The Mother-Child Home Program	Levenstein
Experimental Variation of Head Start Curricula	Miller
Harlem Training Project	Palmer
Perry Preschool Project	Weikart
Curriculum Demonstration Project	Weikart
Carnegie Infant Program	Weikart
Micro-Social Learning System	Woolman
Head Start & Follow Through New Haven Study	Zigler